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on behalf of

**Faiz Foundation, Model Town, Lahore**

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25<sup>th</sup> Interactive Session

# **Obesity and Diet Therapy**

# Obesity

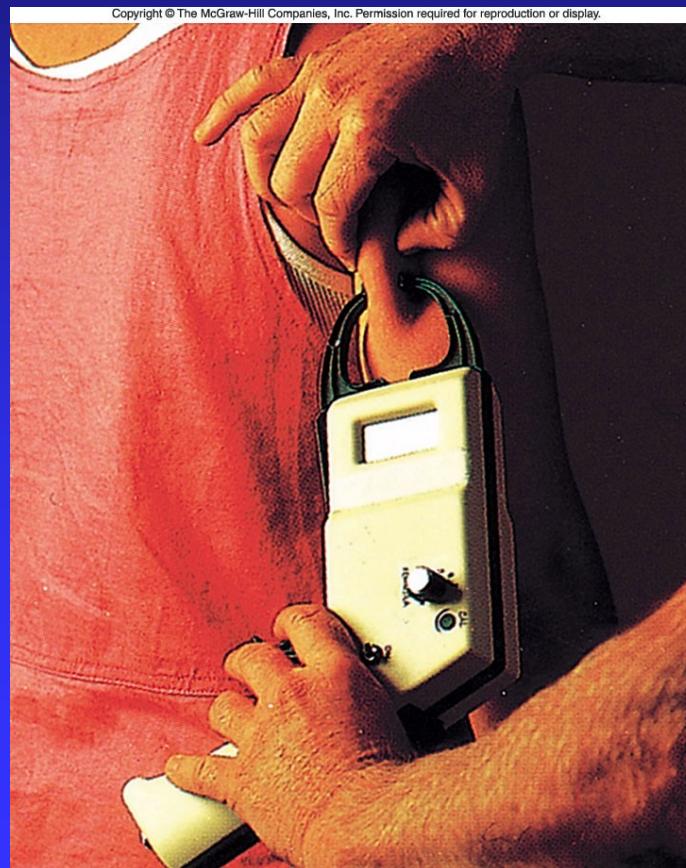


- Excessive amount of body fat
  - Women with > 35% body fat
  - Men with > 25% body fat
- Increased risk for health problems
- Are usually overweight, but can have healthy BMI and high % fat
- Measurements using calipers

# Desirable % Body Fat

Men: 8-25%

Women 20-35%

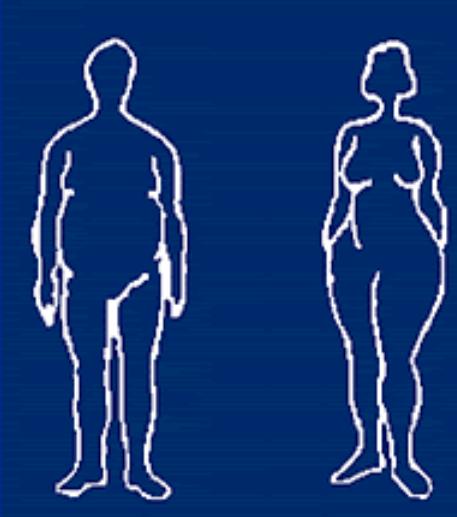


# Regional Distribution

The regional distribution of body fat affects risk factors for the heart disease and type 2 diabetes

## Patterns of Body Fat Distribution

Abdominal  
(Android)



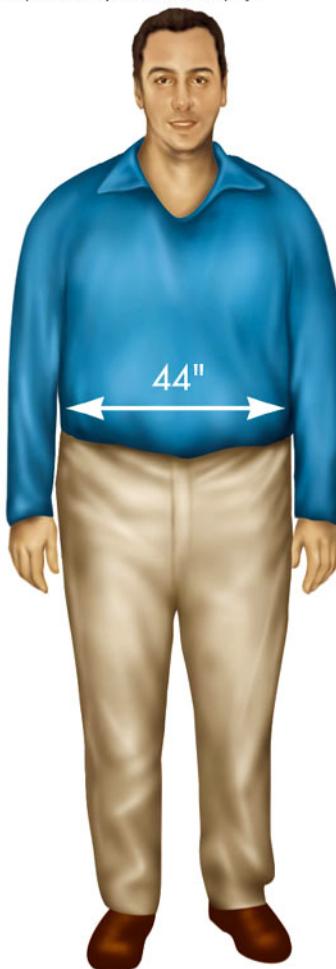
Lower Body  
(Gynoid)

# Body Fat Distribution

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Lower-body obesity



Upper-body obesity

# Causes of Obesity



**Obesity tends to run in families**

**If both parents are normal weight – 10% chance of obesity in offspring**

**If one parent is obese – 40% chance. If both parents obese – 80% chance**

# Why We Eat More?

## 1. **Active**

Large portion sizes, frequent meals and snacks

## 2. **Passive**

Excessive intake of energy-dense foods

## 3. **Variety of options**

Greater variety of foods, greater the intake

## 4. **Sensory-specific satiety**

As foods are consumed they become less appealing

# Major Causes of Death

#1 Smoking



# 2 Obesity



# Health Problems Associated with Excess Body Fat

- Surgical risk
- Lung (pulmonary) disease
- Sleep apnea
- HTN
- CVD
- Bone and joint disorders (gout, osteoarthritis)
- Type 2 diabetes
- Gallstones
- Cancers (breast, colon, pancreas, gallbladder)
- Infertility
- Pregnancy- difficult delivery
- Reduced agility
- Early death

# Metabolic Syndrome Criteria\*

**Three or more of the following abnormalities:**

**1. Waist circumference**

Men       $>102$  cm (40 inches)  
Women  $> 88$  cm (35 inches)

**2. Serum triglycerides of at least 150 mg/dL**

**3. High density lipoprotein level  $<40$  mg/dL in men  
and  $<50$  mg/dL in women**

**4. Blood pressure  $\geq 135/85$  mm/hg**

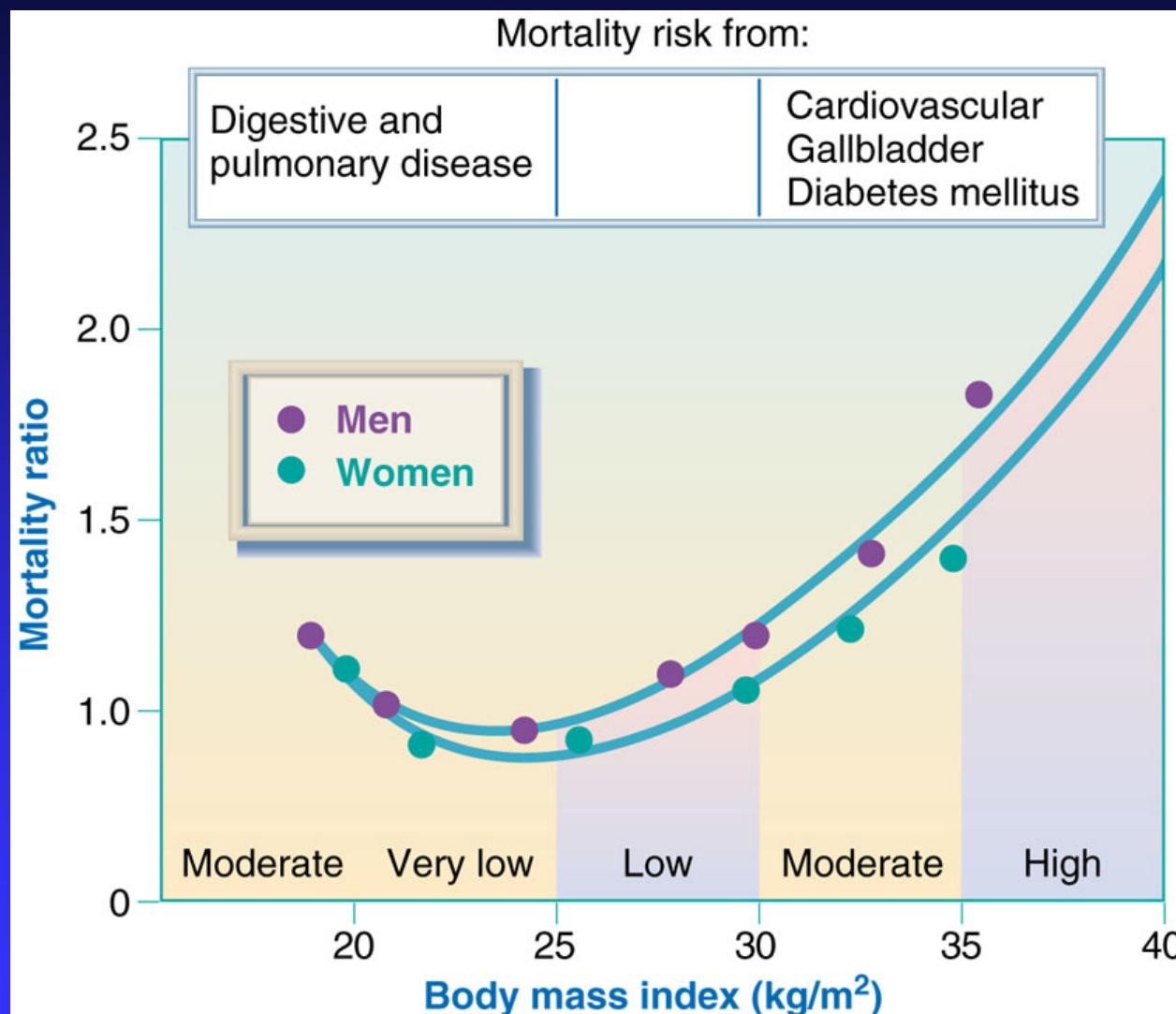
**5. Serum glucose  $\geq 110$  mg/dl**

\*ATP III Guidelines. National Cholesterol Education Program, 2001

# BMI and Health

Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight Monitor for risk
30.0 and Above	Obese Increased health risk
40.0 and above	Severely obese Major health risk

# Body Mass Index and Mortality Risk



(Adapted from Bray GA, Gray DS. Obesity, part 1: Pathogenesis. West J Med 149:429, 1988; and Lew EA, Garfinkle L. Variations in mortality by weight among 750,000 men and women. J Clin Epidemiol 32:563, 1979.)

# Dietary Guidelines



# Rule 1: Reduced Calorie Diets

- An individualized reduced calorie diet.
- Reducing dietary fat to cut 500 – 1000 kcal per day may result in a weight loss of 1 – 2 lbs per week.

## Rule 2

# Balanced Energy-Restricted Diet

- Should be relatively high in carbohydrate (50-55% of total kcals)
  - CHO sources should be fruits, vegetables, whole grains
- Include generous protein (15-25% of kcals) for increased satiety and to assure adequate supply
- Fat < 30% of kcals
- Increased fiber to improve satiety (NIH, 1998)

## Rule 2 cont...

### Balanced Energy-Restricted Diet

- High-sugar foods should be limited to limit excess energy (avoid alcohol)
- Use of non-nutritive sweeteners and fat replacements may improve the palatability of the diet
- Vitamins and mineral supplements may be needed in programs that provide <1200 kcals for women or 1800 kcals for men (NIH, 1998)

# Rule 3

## Nutrition Education

- Nutrition education should be individualized and included as part of the diet component of a comprehensive weight management program.
- Nutrition education (e.g. reading nutrition labels, recipe modification, cooking classes) increases knowledge and may lead to improved food choices.

# Rule 4

## Physical Activity

- At least 30 minutes or more of moderate intensity physical activity on most, and preferably, all days of the week, unless medically contraindicated.
- Physical activity contributes to weight loss, may decrease abdominal fat, and may help with maintenance of weight loss
- Other Benefits are Improved sense of well-being, Relief of boredom, Sense of control and Relief from depression

Last but not least

